Exercise 4: Communication System

Purpose: Design a communication system by extending Exercise 3.

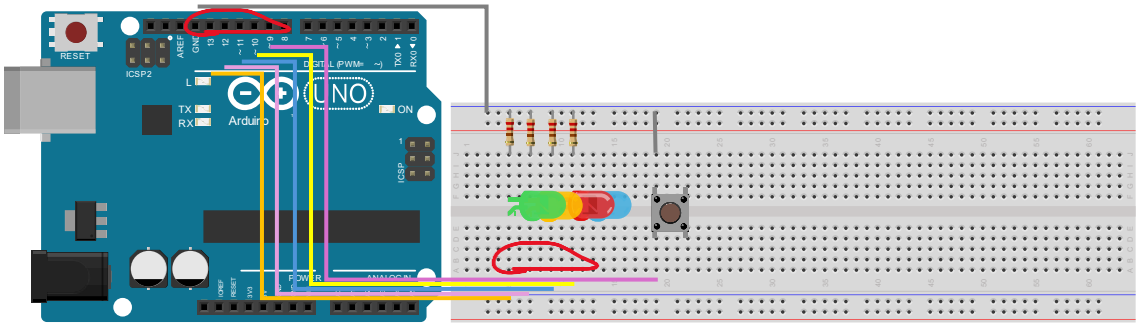
There are three factors to identify an answer to a question:

1. Position of the LED.
   Left to right corresponds to questions 1 to 4.
2. Colour of the LED.
   Each question has a unique colour.
3. State of the LED.
   ON is YES and OFF is NO.

Instructions

1. Unplug your Arduino Uno from the PC.
2. Follow Exercise 2 and add 3 more LEDs to the breadboard.
3. The order should be as follows:
   a. **Pin 13**: Green.
   b. **Pin 12**: Orange.
   c. **Pin 11**: Red.
   d. **Pin 10**: Blue.
4. Ensure that each LED is connected to a resistor as in Exercise 2.

5. Your connection should look as follows.



6. Navigate to CommTest.cpp and copy the contents to the Arduino IDE text area.
   Open the file → Select All (CTRL+A) → Copy (CTRL+C).
   Open Arduino IDE Window → Select Text Area → Paste (CTRL+V).
7. Verify and upload the sketch to the Arduino Uno.
8. Confirm all LEDs are ON, and the pushbutton turns them OFF.
9. Navigate to CommSystem.cpp and copy the contents to the Arduino IDE text area.
   Open the file → Select All (CTRL+A) → Copy (CTRL+C).
   Open Arduino IDE Window → Select Text Area → Paste (CTRL+V).
10. Verify and upload the sketch to the Arduino Uno.
11. Press the pushbutton and confirm the example works.
12. When ready, answer the questions written on the board by modifying your code.
13. Press the button to demonstrate your answers.